TROPICAL RAINFALL MEASURING MISSION

June 26, 2000 - July 2, 2000
DOY 178 - 184
Day of Mission 941 - 947

TRMM MISSION OPERATIONS

- TRMM is flying in the +X Forward direction as of 00-155, at 08:26:19z.
- Yaw maneuver #43 is scheduled for July 5th (00-187).
- Delta-V maneuver #206 is scheduled for July 3rd (00-185), using the LBS thrusters.
- The Beta angle range for 00-185 through 00-191 is +11.01° to -11.01°.
- The next Monthly Status Review is scheduled for July 5th (00-187).
- The next CCB meeting is scheduled for July 13th (00-195).

TRMM SUBSYSTEM OPERATIONS

Attitude Control System (ACS)

00-180 (Wednesday, June 20th)
Delta-V maneuver #205 was successfully conducted at 14:30:00z and 15:28:17z for durations of 45.125 and 20.875 seconds respectively, using the LBS thrusters. The off-modulation of the -Yaw (#1) and +Pitch thrusters (#2) for burn 1 was 9.1% and 22.5% (91.9% and 77.5% on time). The off-modulation of the +Pitch thruster (#2) for burn 2 was 18.6% (81.4% on time). The remaining fuel is 565.207 kg, and the final apogee and perigee height is 354.84 km x 347.65 km.

Flight Data System (FDS)/Command & Data Handling (C&DH)

The current frequency standard offset remains x'796' with a current drift rate of -2.20 μs/hr. The UTCF remains 31535996.843867 seconds with a current drift value of -930 μs. The UTCF will be adjusted on 00-185 (Monday, July 3rd).

Reaction Control Subsystem (RCS)

The RCS subsystem performed nominally during this period. See the ACS section for specific Delta-V information.

Power Subsystem

The Power subsystem operated nominally during this period.

00-178 (Monday, June 26th)
The Auto-SPRU was disabled @ 16:07:07z now that battery overcharging is no longer a concern. The eclipse periods have been growing as TRMM is moving away from the high Beta Angle.

Electrical Subsystem

The Electrical subsystem operated nominally during this period.

Thermal Subsystem

The Thermal subsystem operated nominally during this period.

Deployables Subsystem

The Deployables subsystem performed nominally during this period.

RF/Communications Subsystem

The RF/Communications subsystem performed nominally during this period.

SPACECRAFT INSTRUMENTS

CERES

The CERES instrument remains in Safe Mode following the DAP microprocessor telemetry dropout which was reported last week (AR #82).

00-178 (Monday, June 26th)
Two ADC tables were uplinked to the DAP processor at 18:08:20z (CR#389), in an attempt to characterize the processor's problems. The ICP processor was then reset by the Watchdog timer (Ground command, CR#390), which also resets the DAP. The Total, Long wave, and Short wave temperature controllers were then disabled, as were the Sun Presence Sensors, and the ICP's Watchdog timer was reenabled.

00-181 (Thursday, June 27th)
The SWICS Lamp intensity was then set to Level3 (High, CR#392) at 19:41:37 to help reduce the voltage level coming through the converter in an attempt to revive the DAP.

00-182 (Friday, June 30th)
The ICP was reset at 14:31:33 by the Watchdog Timer in preparation for new table loads (CR#393), which also resets the DAP. The Total, Long wave, and Short wave temperature controllers were then disabled, as were the Sun Presence Sensors, and the ICP' s Watchdog timer was Re-enabled. Set the SWICS Lamp Intensity back to Level3.
At 21:05:00 a new MUX table was loaded to dwell on different telemetry points (CR#396). At 23:18:00 the DAP processor was reset by the Watchdog timer (Ground command, CR#395). The Total, Long wave, and Short wave temperature controllers were then disabled, as were the Sun Presence Sensors, and the ICP's Watchdog timer was reenabled. Set the SWICS Lamp Intensity back to Level3.

LIS

LIS performed nominally during this time period.

PR

PR performed nominally during this time period.

The list of Internal Calibration times over Australia in which PR was not radiating is below:

2000/179:03:25:40 - 03:27:49z
2000/179:19:43:46 - 19:46:55z
2000/180:02:14:02 - 02:16:16z
2000/181:02:36:37 - 02:38:44z
2000/182:01:25:18 - 01:27:30z
2000/182:17:44:44 - 17:47:51z
2000/183:01:48:02 - 01:50:10z
2000/184:00:36:29 - 00:38:40z
2000/184:16:54:06 - 16:59:11z

TMI

TMI performed nominally during this time period.

VIRS

VIRS performed nominally during this time period.

00-184 (Sunday, July 2nd)
Two Solar Cals were performed at 21:44:56z and 23:16:16z, both were two minutes in duration.

GROUND SYSTEM

TDRS Spare was changed to SGLT 5 from SGLT 1 and WSC discovered a bad UP Converter Power Supply on SGLT 5. WSC failed back to SGLT 1 and in the process lost the event, although it still appeared as a valid event in the NCC and UPS systems. In an effort to recover data, CSC requested that NCC scheduling create an event for 184 / 0009z to 184 / 002400z. Lock was lost at 184 / 001615z due to TRMM going out of view of TDRS. The FOT then worked to obtain a full-view event and all data was recovered during the following added event. ER#185 / TTR#22068

Event Reports

#185: SGLT 5 Problem caused loss of event (See Ground System section for more information)

Generic Late Acquisition Reports (for TTRs 19639)

00-182 (Friday, June 30th)
#61: 18:21:19z TDE/SSA2 Event: 1 min. 18 sec Generic Late Acquisition.

New Anomaly Reports

No new Anomaly Reports were generated during this period.

Recurring Open Anomaly Reports

No Open Anomalies were observed during this period.

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